

A LIST OF AUSTRALIAN MACTRIDÆ, WITH A DESCRIPTION OF  
A NEW SPECIES.

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Read 17th April, 1914.

MR. H. H. BLOOMER recently very kindly sent to the British Museum a few specimens of a *Maetra* from Queensland, asking me to give him the name of the species, or, if unnamed, to publish a description of it.

Not finding it in the collection in the British Museum, it became necessary to study the literature bearing upon this group of Mollusca, and more particularly that portion of it relating to the Australian fauna. In doing this it seemed advisable to get together and publish a list of the known Mactridæ of Australia, which it is hoped may prove of some use to authors and collectors on that continent. Forty different species are now recorded, but some of these, namely, *decora*, Desh., *olorina*, Phil., *ornata*, Gray, and *sericea*, Desh., require confirmation as being Australian.

A few other species described or quoted as Australian are beyond recognition, such as *antiquata*, Spengler (= *chemnitzii*, Gray), *australis*, Sow., *decussata*, Menke, and *rotundata*, Gmelin.

The last-named (Syst. nat., vol. vi, p. 3257) was founded upon two figures representing totally different species, and consequently had better be regarded as unrecognizable. Its habitat was unknown to Gmelin, but in Paetel's Catalogue (vol. iii, p. 33, 1890) Australia is given.

No attempt has been made to give complete synonymy and references, but only those are quoted which seemed necessary or of special importance.

The species are arranged in alphabetical order for easy reference, the sectional names, where present, being placed in brackets, and I would here observe that some of the sub-genera and divisions which have been proposed appear to be of little or no use. Reeve's monograph in the *Conchologia Iconica*, vol. viii, 1854, and that by Weinkauff in the *Conchylien Cabinet* (1880-4) are referred to in the following list, for the sake of brevity, merely under those authors' names.

1. MACTRA ABBREVIATA, Lamarek. B.M.<sup>1</sup>

*Maetra abbreviata*, Lamarek, Anim. sans Vert., vol. v, p. 477, 1818;  
Mabille in Hedley, Proc. Linn. Soc. N.S. Wales, vol. xxvii,  
p. 597, 1903.

*M. obesa*, Deshayes, P.Z.S., 1853, p. 16; Reeve, fig. 19; Weinkauff,  
p. 48, pl. xvi, figs. 3-4.

var. = *M. meretriciformis*, Deshayes, l.c., p. 16; Reeve, fig. 18;  
Weinkauff, p. 58, pl. xx, figs. 3-3a.

*Hab.*—Torres Straits (Deshayes for *obesa*), north-east coast of  
Australia (J. B. Jukes in Brit. Mus.), Cape York (Brit. Mus.), Port

<sup>1</sup> The letters B.M. indicate that the species is in the British Museum.

Essington (Deshayes for *meretriciformis*), Port Curtis (Brit. Mus. for *meretriciformis*).

The locality "Port Jackson" given by Lamarck is doubtful, or at all events requires confirmation. Without the aid of the description of *M. abbreviata* given by M. Mabile it was quite impossible to recognize the species. I believe that Lamarck's types are merely half-grown examples of the species named *M. obesa* by Deshayes. The form, "obtuse trigona, transversim abbreviata," the colour, "alba," and the character of the dorsal areas, "ano vulvaque elegantè plicatis," are quite features of *obesa*. The proportion of height to length corresponds to the measurements given by Mabile. I agree with Weinkauff's suggestion (p. 49) that *M. obesa* and *M. meretriciformis* are merely varieties of one and the same species. They agree in every detail, excepting that the latter is bluish towards the umbones, and purplish within the valves.

The shell figured by Hedley (Proc. Linn. Soc. N.S. Wales, vol. xxvii, pl. xxix, figs. 1-3) certainly cannot be the true *abbreviata*, and I am inclined to think that it belongs to *M. pura* as suggested by Pritchard & Gatliff (Proc. R. Soc. Victoria, vol. xii, p. 106, 1900).

*M. abbreviata*, Lamarck, is quoted by Menke<sup>1</sup> from West Australia, and by Gray in P. P. King's *Narrative of a Survey of the Coasts of Australia*, vol. ii, Appendix, p. 474, but it is impossible to say what species those authors had before them.

Since the foregoing was written I sent a valve of this species to Dr. E. Lamy, of the Paris Museum, and he has most kindly confirmed my identification. He writes: "Il n'y a pas de doute possible: la valve est bien conforme aux deux types de *M. abbreviata*, Lk. Votre valve par ses caractères de forme, de sculpture (ano vulvaque plicatis), de dent cardinale, de sinus pallial me paraît absolument conforme aux types de *M. abbreviata*."

## 2. MACTRA ACHATINA, Chemnitz. B.M.

*Mactra achatina*, Chemnitz, Conch. Cab., vol. xi, p. 218, pl. cc, figs. 1957-8; Reeve, fig. 51; Weinkauff, p. 50, pl. xvii, figs. 3-4; Hedley, Rep. Aust. Assoc. Adv. Sci. 1909, p. 351, 1910.

*Hab.*—Ceylon or Nicobar Islands (Chemnitz), Philippine Islands (Reeve), Manila (Hidalgo), Red Sea (?), coast of Bengal, East Africa, China (Weinkauff), Queensland (Hedley).

Placed in the Australian list on Mr. Hedley's authority. This species and *M. ornata* (Gray) may have been confounded.

## 3. MACTRA (SPISULA) ADELAIDÆ, Angas. B.M.

*Spisula adelaidæ*, Angas, MSS., Proc. Zool. Soc., 1865, p. 697.

*Hab.*—Port Adelaide Creek, South Australia (Angas). Type in Brit. Mus. Adelaide (C. J. Wigram in B.M.).

In his diagnosis Angas omitted to state that the sculpture consists merely of the fine lines of growth, and the interior of the shell is not referred to. The valves are white within, and the pallial line is

<sup>1</sup> Moll. Novæ Hollandiæ, 1843, p. 45.

practically *without any sinus*, a feature which distinguishes it from the other small species of Mactridæ from the Australian coast.

The lateral teeth are long, and smooth within and without, but the single tooth on each side in the left valve is roughened or microscopically granular on the edge. There is a single solid triangular  $\Lambda$ -shaped cardinal tooth in this valve, in front of the resilium pit, and a minute denticle above the point of the  $\Lambda$ . A similar  $\Lambda$  tooth is in the right valve, the posterior phlange of the



$\Lambda$  forming the boundary of the resilium pit. The triangular resilium reaches to the umbones, causing a slight break in the dorsal margin. The external ligament is feeble, thin, marginal, and scarcely anything more than a hair-like line.

Tate (Trans. R. Soc. S. Aust., vol. ix, p. 84, 1887) united this species with *M. ovalina*, Lamarek, but that form is a very different shell according to Delessert's figure.

#### 4. MACTRA (STANDELLA) ÆGYPTIACA, Chemnitz. B.M.

*Mactra ægyptiaca*, Chemnitz, Conch. Cab., vol. xi, p. 218, pl. 200, figs. 1955-6; Dillwyn, Cat., p. 145; Reeve, pl. xx, fig. 112.

*Spisula ægyptiaca*, Gray, Mag. Nat. Hist., i, p. 373, 1837.

*Merope ægyptiaca*, Angas, Proc. Zool. Soc., 1871, p. 100.

*Hab.*—Port Essington and Port Curtis (Brit. Mus.), North Australia (Mrs. Ince in Brit. Mus.), Red Sea (Chemnitz), Ceylon (Reeve), Lake Macquarie, New South Wales (Angas), whole of Queensland coast (Hedley).

The Port Essington specimens were collected by Mr. John Gould, the ornithologist, and J. McGillivray, and consequently the locality may be relied upon as correct. This species may be, as suggested by some authors, the *M. nicobarica* of Gmelin, founded on a figure in Chemnitz (vol. vi, pl. xxiv, fig. 237).

#### 5. MACTRA ALTA, Deshayes. B.M.

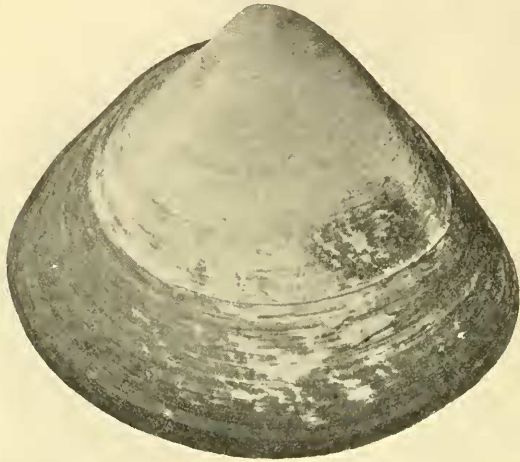
*Mactra alta*, Deshayes, Proc. Zool. Soc., 1854, p. 347; Weinkauff, p. 113.

*Hab.*—North-east coast of Australia (Brit. Mus.), Australia (Weinkauff and Deshayes).

Length 70, height 63, diam. 39 mm.

Allied to *M. abbreviata*, but differing somewhat in form, being more equilateral, less produced posteriorly, and higher in proportion

to the length. The dorsal margin is regularly curved or arched on both sides of the umbones. The hinge also offers some differences, the teeth being rather more delicate, and the posterior lateral passes into the lower edge of the chondrophore and not upwards towards



the dorsal margin. The hinder adductor scar is rather smaller, and the pallial sinus a little deeper. There is very little difference in the external sculpture.

6. *MACTRA* (*SPISULA*) *AMYGDALA*, Crosse & Fischer. B.M.

*Mactra amygdala*, Crosse & Fischer, Journ. de Conch., vol. xii, p. 349; vol. xiii, p. 426, pl. xi, fig. 3; Weinkauff, p. 81, pl. xxviii, fig. 1.

*Trigonella amygdala*, Angas, Proc. Zool. Soc., 1865, p. 645.

*Hab.*—Spencer's Gulf, South Australia (Angas).

7. *MACTRA* (*MACTRINULA*) *ASPERSA*, Sowerby. B.M.

*Mactra aspersa*, Sowerby, Tankerville Catalogue, Appendix, 1825, p. 11; Reeve, pl. xiv, fig. 65; Weinkauff, p. 77, pl. xxvi, fig. 5.

*M. tenera*, Wood, Index test. Suppl., p. 4, pl. i, fig. 4.

*Spisula tenera*, Gray, Mag. Nat. Hist., vol. i, p. 373, 1837.

*Hab.*—Torres Straits (Mus. Cuming), Attagor Islet, Torres Straits, (J. B. Jukes in Brit. Mus.), Philippine Islands (Reeve and Hidalgo), New Caledonia (Weinkauff), Van Diemen's Land (Wood), Queensland (Hedley).

## 8. MACTRA AUSTRALIS, Lamarck. B.M.

*Maetra australis*, Lamarck, Anim. sans Vert., vol. v, p. 475, 1818.

*M. polita* (Chemnitz), Reeve, pl. x, fig. 39; Weinkauff, p. 14, pl. iv, figs. 5, 6.

*Trigonella polita*, Angas, Proc. Zool. Soc., 1865, p. 645.

*Hab.*—Port King George, South-Western Australia (Lamarck), Spencer's Gulf and Encounter Bay, South Australia (Angas), Swan River (Reeve), Port Denison (Weinkauff), Holdfast Bay, South Australia and Adelaide (Brit. Mus.), St. Vincent and Spencer Gulfs, Fowler Bay and Head of Great Australian Bight (Tate), Gellibrand Coast, Cape Bridgewater, Portland, Victoria (Pritchard and Gatliff).

*Maetra australis* in Dillwyn, 1817 (Cat., p. 141) is the *Mya australis*, Gmelin (Syst. nat., p. 3221) = *Mya novæ zelandiæ*, Chemnitz. That shell, however, is a *Mesodesma*.

## 9. MACTRA (MACTRINULA) COMPLANATA, Deshayes. B.M.

*Maetra complanata*, Deshayes, Proc. Zool. Soc., 1853, p. 14; Reeve, pl. xii, fig. 54; Weinkauff, p. 27, pl. ix, fig. 3.

*Hab.*—Australia (J. B. Jukes in Brit. Mus.), Indian Ocean (Deshayes and Reeve), Ceylon (Weinkauff).

## 10. MACTRA CONTRARIA, Deshayes. B.M.

*Maetra contraria*, Deshayes, Proc. Zool. Soc., 1854, p. 62; Reeve, pl. xvii, fig. 86.

*Trigonella contraria*, Angas, Proc. Zool. Soc., 1867, p. 316.

*Maetra rugifera*, Dunker, Novitat. Abth., ii, p. 41, pl. xiii, figs. 1-3.

*Hab.*—? (Deshayes), Port Jackson (Angas), Richmond River, New South Wales (J. Brazier in Brit. Mus.), Swan River (Dunker).

## 11. MACTRA (OXYPERAS) COPPINGERI, Smith. B.M.

*Maetra (Oxyperas) coppingeri*, Smith, Rep. Zool. Coll. Alert, 1884, p. 100, pl. vii, figs. *d-d* 2.

*Hab.*—Thursday Island, Torres Straits, 4-6 fathoms (Brit. Mus.), Queensland (Hedley).

## 12. MACTRA CUVIERI, Deshayes. B.M.

*Maetra cuvieri*, Deshayes, Proc. Zool. Soc., 1853, p. 17; Weinkauff, p. 117.

*Maetra cuningii*, Reeve, fig. 24; Weinkauff, pl. xxv, figs. 3, 3a.

*Hab.*—Moluccas (Deshayes and Reeve), West Australia, Swan River (Brit. Mus.).

As pointed out by Weinkauff, this species was described by Deshayes under the name *cuvieri* and not *cuningii* as stated by Reeve.

13. *MACTRA DECORA*, Deshayes. B.M.

*Mactra decora*, Deshayes, Proc. Zool. Soc., 1854, p. 63; Weinkauff, p. 39, pl. xii, figs. 8, 9; Reeve, fig. 80.

*M. pulchra*, Gray, Mag. Nat. Hist., vol. i, p. 372, 1837, name only; Reeve, sp. 60, fig. 63, 1854; Weinkauff, p. 56, pl. xix, figs. 5, 6.

*M. jickelii*, Weinkauff, p. 54, pl. xix, figs. 1, 2.

*Hab.*—New South Wales (Weinkauff for *decora*), ? (Deshayes), Red Sea (Reeve for *pulchra*), also Weinkauff, Banda Island, Aden and Muscat (Brit. Mus.), Red Sea (Weinkauff for *jickelii*).

This common species is included in the Australian list merely on the authority of Weinkauff. I fail to discover any distinguishing features of importance between *M. pulchra* and the present species. The former may be a trifle more rostrate behind, like *olorina*, Phil., in that respect.

14. *MACTRA DECUSSATA*, Menke.

*Mactra decussata*, Menke, Moll. Novæ Hollandiæ, 1843, p. 46.

*Hab.*—West Australia (Menke).

This species is not referred to by Reeve, Weinkauff, or Conrad in their monographs. It was not figured by Menke, and from his brief Latin diagnosis I am unable to recognize it among the species since described.

15. *MACTRA DISSIMILIS*, Deshayes. B.M.

*Mactra dissimilis*, Deshayes, Proc. Zool. Soc., 1854, p. 63; Reeve, pl. xiii, fig. 59; Weinkauff, p. 113.

*Hab.*—Australia (Deshayes and Reeve), Cape York (J. B. Jukes in Brit. Mus.), Inkerman, near Townsville, North Queensland (W. Stalker in Brit. Mus.), Queensland (Hedley), Port Curtis (Brit. Mus.)

16. *MACTRA EXIMIA*, Deshayes. B.M.

*Mactra eximia*, Deshayes, Proc. Zool. Soc., 1853, p. 16; Reeve, pl. viii, fig. 31; Weinkauff, p. 99, pl. xxxiii, fig. 6 (copied from Reeve).

*Hab.*—Moreton Bay (Deshayes), Port Curtis, Port Denison, and north-east coast of Australia (Brit. Mus.), Queensland (Hedley).

This may be the shell quoted by Menke (Moll. Novæ Hollandiæ, p. 45) as *M. helvacea*, Chemnitz, a European species.

17. *MACTRA (MACTRINULA) EXPLANATA*, Deshayes. B.M.

*Mactra explanata*, Deshayes, Proc. Zool. Soc., 1854, p. 66; Reeve, pl. xiv, fig. 70; Weinkauff, p. 90, pl. xxxi, fig. 1 (copied from Reeve).

*Hab.*—Swan River (Deshayes and Reeve).

18. *MACTRA INCARNATA*, Deshayes. B.M.

*Mactra incarnata*, Deshayes MSS.; Reeve, pl. xiii, fig. 61; Weinkauff, p. 108, pl. xxxvi, fig. 5; Smith, *Challenger* Lamellibranchiata, p. 58.

*Trigonella incarnata*, Conrad, Amer. Journ. Conch., vol. iii, Appendix, p. 37.

*Hab.*—Swan River (Reeve), Philippine Islands (Smith).

19. *MACTRA JACKSONENSIS*, Smith. B.M.

*Mactra jacksonensis*, Smith, *Challenger* Lamellibranchiata, p. 62, pl. v, figs. 9–9b.

*Trigonella pusilla*, Angas (*nec* Adams), Proc. Zool. Soc., 1867, p. 916.

*Hab.*—Port Jackson (*Challenger*), Port Darwin (Brit. Mus.), Mast Head Reef, Capricorn Group, Queensland (Hedley), Hog Bay, Kangaroo Island, and Streaky Bay, Great Australian Bight (Tate), off Rhyll, Western Port, and off Portsea, Victoria (Pritchard and Gatliff).

20. *MACTRA LUZONICA*, Deshayes. B.M.

*Mactra luzonica*, Deshayes, Proc. Zool. Soc., 1854, p. 64; Reeve, fig. 81; Weinkauff, p. 49, pl. xvii, figs. 1, 1a, 2, 2a.

*Trigonella luzonica*, Angas, Proc. Zool. Soc., 1867, p. 916.

*Mactra apicina*, Deshayes MSS.; Reeve, fig. 111; Hedley, Rep. Aust. Assoc. Adv. Sci. 1909, p. 351, 1910.

*Hab.*—Luzon, Philippine Islands (Deshayes and Hidalgo), Middle Harbour and Botany Bay, Sydney (Angas), Queensland (Hedley for *apicina*).

*M. apicina* is not a white variety of *M. opposita*, Deshayes, as suggested by Weinkauff, but merely the young of the white variety of *M. luzonica*.

21. *MACTRA MACULATA* (Chemnitz), Gmelin. B.M.

*Mactra maculata*, Chemnitz, Conch. Coll., vol. vi, pp. 208, 217, pl. xxi, figs. 208, 209; Gmelin, vol. vi, p. 3260; Reeve, fig. 56; Weinkauff, p. 10, pl. iii, figs. 4, 5; pl. xvi, figs. 5, 6.

*Hab.*—Nicobar Islands (Chemnitz), Philippine Islands (Reeve, Hidalgo, and Weinkauff), Port Essington, Torres Straits, and Claremont Island, North Queensland (Brit. Mus.), Goram Island, Molucca Group (Brit. Mus.), Mast Head Reef, off Queensland (Hedley).

The single specimen from Torres Straits is entirely white excepting the characteristic brownish stain within the valves at the hinder end.

22. *MACTRA MATTHEWSI*, Tate. B.M.

*Mactra matthewsi*, Tate, Trans. Roy. Soc. S. Aust., vol. xi, p. 60, pl. xi, fig. 4.

*Hab.*—Royston Head, Spencer's Gulf, South Australia (Tate and Brit. Mus.).

23. *MACTRA MERA*, Deshayes. B.M.

*Mactra mera*, Deshayes, Proc. Zool. Soc., 1853, p. 16; Reeve, fig. 82; Weinkauff, pl. xxxvi, fig. 7.

*M. antiquata*, Reeve (*non* Spengler), Couch. Icon., sp. 22; Weinkauff, p. 41, pl. xiii, figs. 4, 5.

*Hab.*—Sydney (J. McGillivray in Brit. Mus.), Bay of Manila (Reeve), Philippine Islands, several localities (Hidalgo), Singapore and Australia (Weinkauff), Singapore and North Borneo (Brit. Mus.), Chinese Sea (Deshayes for *mera*).

This species is not, I think, the *M. antiquata* of Spengler founded on a description and figure in Chemnitz (Conch. Cab., vol. xi, p. 217, pl. cc, fig. 1954). The shell then described was 4 inches in length and white, both *within and without*, and purplish at the umbones.

The species now under consideration is more trigonal, and does not appear to attain such a large size, the largest specimen I have seen being only  $3\frac{1}{4}$  inches long. It is invariably of a rich purplish-brown within, and marked externally with brown radiating lines or stripes.

The *M. antiquata* of Spengler is probably the same as *M. cornea*, Deshayes,<sup>1</sup> of which *M. spectabilis* of Lischke<sup>2</sup> from Japan is a synonym.

*M. cornea* was described as coming from the "Chinese Sea", one of the localities given by Chemnitz in the original description. The type is only a half-grown shell, but the species attains a very large size, a specimen from Japan in the Museum collection being nearly 5 inches long. It is uniformly whitish externally beneath the thin periostracum, excepting the purple or violet umbones. The interior also is whitish excepting the upper part, which is a kind of pale flesh tint.

The type of *M. mera* is very faintly rayed, but this feature is not noticed either by Deshayes or Reeve. This, however, is not surprising, since the rays are only just traceable when the shell is carefully examined, and might otherwise be easily overlooked.

24. *MACTRA OLORINA*, Philippi. B.M.

*Mactra olorina*, Philippi, Abbild., vol. ii, p. 72, pl. ii, fig. 2, 1846; Reeve, fig. 35; Weinkauff, p. 39, pl. xii, figs. 4-6.

*M. semisulcata*, Deshayes MSS.; Reeve, fig. 48; Weinkauff, p. 59, pl. xx, figs. 4, 4a.

*Hab.*—Red Sea (Philippi, Reeve, Weinkauff for *olorina*), Australia (Reeve and Weinkauff for *semisulcata*), Persian Gulf (Fischer, J. de Conch., 1891, p. 229).

Allied to *decora*, but larger, differently coloured within and without, and with rather finer sulcation on the anterior portion.

Only known as Australian on Reeve's authority.

<sup>1</sup> Proc. Zool. Soc., 1853, p. 16; Reeve, fig. 75.

<sup>2</sup> Japan. Meeres-Conch., Theil ii, p. 120, pl. xi, figs. 1, 2; Weinkauff, pl. xv, figs. 1, 2.



25. *MACTRA ORNATA*, Gray. B.M.

*Mactra ornata*, Gray, Mag. Nat. Hist., vol. i, p. 371; Reeve, fig. 58; Weinkauff, p. 37, pl. xii, figs. 1-3.

*Hab.*—Australia (Weinkauff), China (Gray, Reeve), Ceylon (Brit. Mus.), Queensland (Hedley).

Recorded as Australian on the authority of Weinkauff and Hedley.

26. *MACTRA (MACTRINULA) OVALINA* (Lamarek). B.M.

*Mactra ovalina*, Lamarek, Anim. sans Vert., vol. v, p. 477, 1818; Reeve, fig. 66; Delessert, Recueil, pl. iii, figs. 7a, b.

*M. depressa*, Spengler, Skrivt. Naturhist.-Selsk., vol. v, Heft ii, p. 118, 1802 (?); Reeve, pl. xiv, fig. 67; Weinkauff, p. 98, pl. xxxiii, fig. 4; Smith, *Challenger* Lamellibranchiata, p. 57.

*Mactrinula angulifera*, Smith (*non* Deshayes), Report *Alert* Collections, 1884, p. 101.

*Hab.*—Middle Port, Melbourne (Brit. Mus.), Australia (Reeve), Port Curtis (Smith), Port Jackson (*Challenger* and Angas), Port Phillip (Angas and Brit. Mus.), Hobson's Bay, Port Phillip, and Western Port (Pritchard & Gatliff), Philippine Islands (Hidalgo).

The Australian specimens are sometimes of a pale reddish tint, especially towards the umbones.

It is doubtful what the unfigured *Mactra depressa* of Spengler, from the coast of Guinea, may have been, but the shell figured and described by Reeve under that name is certainly this Australian species. The *M. ovalina* of Lamarek, from an unknown locality, judging by Delessert's figures (Recueil, pl. iii, figs. 7a, b), is more equilateral. However, this difference may be due to an inaccuracy on the part of the artist, for Dr. Gaston Mermod, of the Geneva Museum, informs me that none of the three Lamarekian shells agrees exactly with Delessert's figure, and the form of the pallial sinus, alike in all three specimens, is not accurately depicted.

He very kindly compared a specimen which I sent him with the Lamarekian types, and he also sent me plaster casts of two of the valves from that historic collection. He writes: "La coquille que vous nous avez envoyée ressemble beaucoup aux exemplaires de Lamarek. Cependant, il existe de petites différences." As these slight differences may only be individual, I am inclined, at present, to accept Reeve's identification of *M. ovalina*, as figured in the *Conchologia Iconica*.

It is placed by Carpenter in the synonymy of *M. fragilis* of Chemnitz, another ill-defined and doubtful species, quoted by Chemnitz from the Nicobar Islands, by Reeve from Honduras, and by other authors from the West Indies, Brazil, etc. What the *M. ovalina*, Lamarek, quoted by Gray (King's *Narrative of a Survey of the Coast of Australia*), may have been, is very doubtful, as I have not been able to trace the specimens he had before him.

Lamarek in 1818 described a *M. depressa* from "les mers de l'Inde", quoting Chemnitz (*Conch. Cab.*, vol. vi, pl. xxiv, fig. 234) as representing it. This figure, however, had already in 1790 been

appropriated by Gmelin as illustrating his *M. pellucida* (Syst. Nat., vol. vi, p. 3260). Chemnitz gave the locality as coast of Guinea.

A single specimen from Port Curtis, Queensland, which I named *Macrinula angulifera*, Deshayes, in the *Alert* Report, I now regard as belonging to the present species, since it lacks the sculptured umbones of *angulifera*, "tenue et regulariter plicatis" (Deshayes, Proc. Zool. Soc., 1854, p. 70).

The umbones in *M. ovalina* are smooth, excepting the delicate growth-lines. There are other differences between these species besides the character of the umbones. In *angulifera* the posterior oblique carina is more pronounced, and forms a distinct terminal angle, and the general form is more triangular.

27. *MACTRA* (*MACTRINULA*) *PARKESIANA*, Hedley.

*Mactra parkesiana*, Hedley, Proc. Linn. Soc. N.S.W., vol. xxvii, p. 8, pl. i, figs. 5-9, 1902.

*Hab.*—Port Jackson, New South Wales, and Queensland (Hedley).  
"Belongs to the Section *Macrinula*" (Hedley).

28. *MACTRA* (*SPISULA*) *PARVA*, Petit. B.M.

*Gnathodon parvum*, Petit, Journ. de Conch., 1853, p. 358, pl. xiii, figs. 9, 10; Sowerby, Conch. Icon., vol. xix, pl. i, fig. 6.

*Synonyms and Varieties.*<sup>1</sup>—*Mactra rostrata*, Reeve (*non* Spengler); *M. corbuloides*, Deshayes; *M. cretacea*, Angas; *Spisula producta*, Angas; *M. (Spisula) fluviatilis*, Angas.

*Hab.*—Moreton Bay (Petit, also Reeve for *rostrata*), Port Jackson (Angas and Brit. Mus. for *producta*), Port Stephen (Angas for *cretacea*), Hawkesbury River (Angas & Brazier for *fluviatilis*), Port Jackson and Moreton Bay (Angas for *corbuloides*), Victoria (Pritchard and Gatliff and Brit. Mus.).

Notwithstanding the considerable difference in form displayed by some of the so-called species mentioned in the above synonymy, I agree with Hedley<sup>2</sup> and Pritchard & Gatliff<sup>3</sup> in considering them variations of one very variable species. The types of all these forms, with the exception of that described by Petit, are in the British Museum, and a careful examination of the hinges shows that they are essentially the same in all. Presuming the Moreton Bay *rostrata* to be full-grown, the species appears to vary much in size, since specimens from Port Phillip are more than double their dimensions, being 26 mm. long, 20 in height, and 14 in diameter.

Conrad and Weinkauff have erroneously placed *M. corbuloides* of Deshayes in the synonymy of *M. lateralis*, Say, from the east coast of the United States. In form and general external character they are

<sup>1</sup> For references see Pritchard & Gatliff, Proc. Roy. Soc. Victoria, vol. xvi, p. 108, 1903.

<sup>2</sup> Proc. Linn. Soc. N.S.W., vol. xxvi, p. 707, pl. xxxiv, figs. 2, 3, hinge, 1902.

<sup>3</sup> Proc. Roy. Soc. Victoria, vol. xvi, p. 108, 1903.

very similar, but the lateral teeth of the American shell are not striated, and the pallial sinus is narrower and deeper.

The true *M. rostrata* of Spengler<sup>1</sup> is altogether a different species, 2½ inches long, and said to have come from the coast of Guinea.

29. MACTRA (SPISULA) PINGUIS, Crosse & Fischer. B.M.

*Maetra pinguis*, Crosse & Fischer, Journ. de Conch., vol. xii, p. 349; vol. xiii, p. 427, pl. xi, fig. 2; Weinkauff, p. 80, pl. xxvii, figs. 5, 5a; Smith, Journ. Linn. Soc., vol. xii, p. 562, pl. xxx, fig. 25, 1876.

*Mulinia pinguis*, Angas, Proc. Zool. Soc., 1865, p. 645.

*Maetra (Mulinia) pinguis*, Tate, Trans. Roy. Soc. S. Australia, vol. ix, p. 84.

*Hab.*—Port Lincoln (Angas), South Australia (Weinkauff), Tasmania (J. Brazier in Brit. Mus.).

30. MACTRA (MACTRINULA) PLICATARIA, Linné. B.M.

*Maetra plicataria*, Linné, Reeve, fig. 26; Weinkauff, p. 7, pl. ii, figs. 4-6.

*M. (Maetrinula) plicataria*, Smith, *Challenger* Lamellibranchiata, p. 57.

*Hab.*—Cape York, North Australia (*Challenger*), Java, Sumatra, Tranquebar, off the Gangetic Delta (Brit. Mus.), Queensland (Hedley).

I still have some doubt with regard to the identification of the *Challenger* specimen, only about half an inch in length.

31. MACTRA PURA, Deshayes. B.M.

*Maetra pura*, Deshayes, Proc. Zool. Soc., 1853, p. 15; Reeve, pl. xii, fig. 53; Weinkauff, p. 26, pl. ix, figs. 1, 1a.

*Trigonella pura*, Angas, Proc. Zool. Soc., 1865, p. 645.

*M. virgo*, Deshayes, op. cit., 1854, p. 66; Reeve, fig. 62; Weinkauff, p. 91, pl. xxxi, fig. 2 (copy of Reeve).

*Hab.*—Australia (Deshayes), Spencer's Gulf, Hardwick Bay, South Australia (Angas), Green Island, off Cairns, Queensland (Hedley), West Australia and Adelaide (Brit. Mus.), Swan River (Deshayes for *virgo*), St. Vincent and Spencer Gulfs, Fowler Bay, Head of the Great Bight, and Eucla. Also King George Sound and Tasmania (Tate).

*M. virgo*, founded on a single shell in the Cuming Collection, differs only from the type of *M. pura* in being a little more acuminate at the hinder end. This I regard merely as an individual variation. The external sculpture, character of the hinge, and the pallial sinus are exactly similar.

*M. australis*, Sowerby, from Swan River, has been referred to the present species by some authors. Judging by the figure (Zool. Beechey's Voy., pl. xlix, fig. 6), the anterior end is too acute. I must

<sup>1</sup> Skrivt. Naturhist.-Selsk., vol. v, Heft ii, p. 115, 1802.

confess, however, it approaches nearer to *M. pura* than any other of the known Australian species.

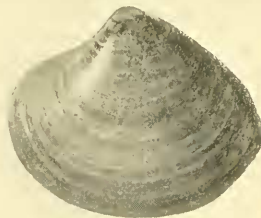
32. *MACTRA PUSILLA*, A. Adams. B.M.

*Mactra pusilla*, A. Adams, Proc. Zool. Soc., 1855, p. 226; Smith, *Challenger* Lamellibranchiata, p. 60, pl. v, figs. 8-8c.  
non *Trigonella pusilla*, Angas, Proc. Zool. Soc., 1867, p. 916 =  
*M. jacksonensis*, Smith.

*Hab.*—Moreton Bay (Adams), Port Jackson (Smith), Brisbane Water, New South Wales (J. McGillivray in Brit. Mus.), Queensland (Hedley).

33. *MACTRA QUEENSLANDICA*, n.sp. B.M.

Testa trigono-ovata, inæquilateralis, mediocriter convexa, dilute griseo-purpurea, apicem versus purpureascentem, pallide zonata, postice anguste hians; valvæ tenues, lineis incrementi tenuiter striatæ, supra umbones fortius striatæ; margo dorsi utrinque declivis, anterior leviter incurvatus, posterior leviter vel vix convexus, ventralis valde arenatus; latus anticum rotundatum, posticum magis acuminatum; umbones paulo ante medium siti, fera contigui; lunula



depressa, cordiformis, linea impressa circumdata; area dorsalis postica excavata, lanceolata, carina tenui marginata; pagina interna purpurascens, ad marginem ventralem flavescens, radiatim tenuissime striata; cicatrices subæquales, antica piriformis, postica ovalis; sinus pallii brevis, rotundatus; dens cardinalis valvæ sinistræ  $\Lambda$ -formis, lamina tenui pone instructus; dentes laterales tenues, breves, prope cardinales. Long. 35, alt. 29, diam. 17 mm.

*Hab.*—Sandgate, near Brisbane, Queensland.

A thin shell of a purplish colour within, excepting the ventral edge, which is yellowish. Externally it is greyish-purplish, but marked with lighter zones, but towards the umbones it is more distinctly purplish. Besides the fine keel marking off the dorsal escutcheon, there is a second faint angle at the posterior end of the valves radiating from the umbones to the hinder extremity.

The line circumscribing the lunule is not incised, but merely faintly impressed, and the marginal ligament, as usual, is distinct

from the resilium. The lateral teeth are thin and short, and conspicuously near the cardinals.

34. *MACTRA RUFESCENS*, Lamarck. B.M.

*Mactra rufescens*, Lamarck, Anim. sans Vert., vol. v, p. 476, 1818; Reeve, pl. iii, fig. 9; Weinkauff, p. 88, pl. xxx, figs. 4, 5; Pritchard & Gatliff, Proc. Roy. Soc. Victoria, vol. xvi, p. 106, 1903.

*Trigonella rufescens*, Angas, Proc. Zool. Soc., 1865, p. 644.

*Hab.*—New Holland (Lamarck), Van Diemen's Land (Reeve, also R. Gunn in Brit. Mus.), Encounter Bay, near mouth of the Murray River, South Australia (Angas), various localities in Victoria (Pritchard & Gatliff), Shark Bay to Tasmania (Tate), Queensland (Hedley).

35. *MACTRA SERICEA*, Deshayes. B.M.

*Mactra sericea*, Deshayes, Proc. Zool. Soc., 1854, p. 65; Reeve, fig. 10; Weinkauff, p. 54, pl. xviii, figs. 4, 4a(?); Paetel, Cat. Conch., Samml. Abtheil., iii, p. 33, 1890.

*Hab.*—? (Deshayes, Reeve, and Weinkauff); Australia (Paetel). Quoted as Australian solely on the authority of the Paetel Catalogue.

I feel rather doubtful whether the shell figured by Weinkauff really belongs to this species, although his description agrees with it.

36. *MACTRA (CYCLOMACTRA) TRISTIS*, Deshayes. B.M.

*Mactra tristis*, Deshayes, Proc. Zool. Soc., 1854, p. 69; Reeve, pl. xiv, fig. 69; Weinkauff, p. 93, pl. xxxi, fig. 6 (copy of Reeve).

*M. (Cyclomactra) tristis*, Dall, Trans. Wagner Inst. Sci., vol. iii, p. 876, 1898.

*Hab.*—Moreton Bay, Queensland (Deshayes, Brit. Mus., and Reeve), New South Wales (Weinkauff), Queensland (Hedley).

This species attains a larger size than the type shell figured by Reeve. The largest specimen in the Museum measures 68 mm. in length, 54 in height, and 28 in diameter. It is much browner externally than the shells described by Deshayes.

37. *MACTRA TURGIDA*, Gmelin. B.M.

*Mactra tumida* seu *inflata*, Chemnitz, Conch. Cab., vol. vi, pp. 208, 218, pl. xxi, figs. 210-12.

*M. turgida*, Gmelin, Syst. Nat., 1790, p. 3260; Weinkauff, p. 11, pl. iii, figs. 6-8.

*M. tumida*, Spengler, Skrivt. Naturhist.-Selsk., vol. v, Heft ii, p. 108, 1802; Reeve, fig. 21.

jun. = *M. cordiformis*, Deshayes MSS.; Reeve, fig. 6; Weinkauff, pl. xxii, figs. 1, 1a(?).

*M. (Cæloactra) turgida*, Dall, Trans. Wagner Inst. Sci., vol. iii, p. 875, 1898.

*Hab.*—North Australia.

I include this species in the Australian list on the strength of a remark written on the back of the tablet containing the type of *M. cordiformis*. In pencil it is written "N. Australia fide specimen in Sydney Museum". *M. cordiformis* is without any doubt merely the young of *M. turgida*, since it agrees with it in every detail, even to the violet umbones, a feature not mentioned by Reeve. The hinge-dentition is identical, and the sculpture of the dorsal areas and the rust-red streaks on both are quite similar.

The locality of *M. turgida* is rather uncertain, since it has been quoted from Tranquebar (Chemnitz), St. Thomas, West Indies (Reeve), also Ceylon (Hanley), and Panama (Bernardi), the last two localities *fide* Weinkauff.

St. Thomas and Panama certainly must be eliminated.

38. *MACTRA* (*SPISULA*?) *VERSICOLOR*, Tate.

*Hemimacra versicolor*, Tate, Trans. Roy. Soc. S. Aust., vol. ix, p. 64, pl. iv, fig. 12, 1887.

*Macra* (*Hemimacra*) *versicolor*, Tate, op. cit., p. 84.

*Hab.*—Lake MacDonnell, Great Australian Bight, south coast of Australia (Tate).

39. *CYPRICIA* *GRAYI*, H. Adams. B.M.

*Raeta grayi*, H. Adams, Proc. Zool. Soc., 1872, p. 13, pl. iii, fig. 23.

*Labiosa grayi*, Hedley, Rep. Aust. Assoc. Adv. Sci. 1909, p. 351, 1910.

*Hab.*—Borneo (Adams), Queensland (Hedley).

The genus *Labiosa*, Schmidt, first appeared in print in an article by Möller in Oken's *Isis*, 1832, p. 136, and all he states is "*Labiosa*, Schm., *Anatina*, Shum." No description is given, and no species cited. We can therefore only *infer* that the shell referred to belonged to the same genus as the species described and figured by Schumacher in his *Nouv. Syst.*, p. 126, pl. viii, fig. i.

On the other hand, Gray in 1853 (*Ann. Mag. Nat. Hist.*, vol. xi, p. 43) gives a short description of his genus *Cypricia*,<sup>1</sup> quoting *C. recurva* as a type, *Macra recurva*, Wood, *Index Test. Suppl.*, p. 4, pl. i, fig. 2, 1828. This species is the same as the well-known *lineata*, Say, originally described as a *Lutrarina* in 1821. It becomes then a question whether the genus *Cypricia* should not be retained rather than *Labiosa*.

I fail to discover any features in *Raeta* which can distinguish it even sub-generically from *Cypricia*.

40. *CYPRICIA* *MERIDIONALIS*, Tate.

*Raeta meridionalis*, Tate, Trans. Roy. Soc. S. Aust., vol. xi, p. 61, pl. xi, fig. 3.

*Hab.*—Aldinga Bay, S. Australia (Tate).

<sup>1</sup> Proc. Zool. Soc., 1847, p. 185, No. 565.

## REFERENCE LIST OF SYNONYMS.

- angulifera*, Smith (*non* Deshayes), see *ovalina*, Lamarck.  
*antiquata*, Reeve (*non* Spengler), see *mera*, Deshayes.  
*apicina*, Reeve, see *luzonica*, Deshayes.  
*australis*, Sowerby, see *pura*, Deshayes.  
*corbuloides*, Deshayes, see *parva*, Petit.  
*cordiformis*, Deshayes, see *turgida*, Gmelin.  
*eretacea*, Angas, see *parva*, Petit.  
*cumingii*, Reeve, see *cuvieri*, Deshayes.  
*depressa* (Spengler?), Reeve, see *ovalina*, Lamarck.  
*fluviatilis*, Angas, see *parva*, Petit.  
*helvacea*, Menke (*non* Chemnitz), see *eximia*, Deshayes.  
*jickelii*, Weinkauff, see *decora*, Deshayes.  
*meretriciformis*, Deshayes, see *abbreviata*, Lamarck.  
*nicobarica*, Gmelin, see *egyptiaca*, Chemnitz.  
*obesa*, Deshayes, see *abbreviata*, Lamarck.  
*polita* (Chemnitz), Reeve, see *australis*, Lamarck.  
*producta*, Angas, see *parva*, Petit.  
*pulchra*, Gray, see *decora*, Deshayes.  
*rostrata*, Reeve (*non* Spengler), see *parva*, Petit.  
*rugifera*, Dunker, see *contraria*, Deshayes.  
*semisulcata*, Deshayes, see *olorina*, Philippi.  
*tenera*, Wood, see *aspersa*, Sowerby.  
*tumida*, Spengler, see *turgida*, Gmelin.  
*virgo*, Deshayes, see *pura*, Deshayes.